

1/9

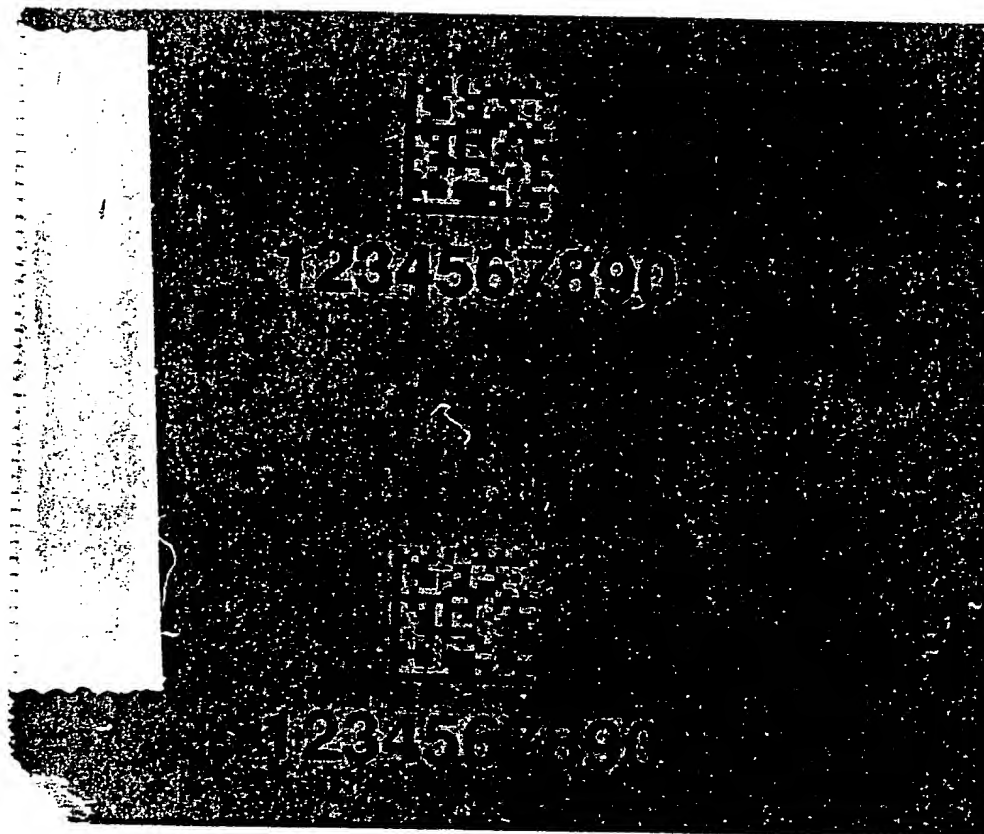


FIG. 1

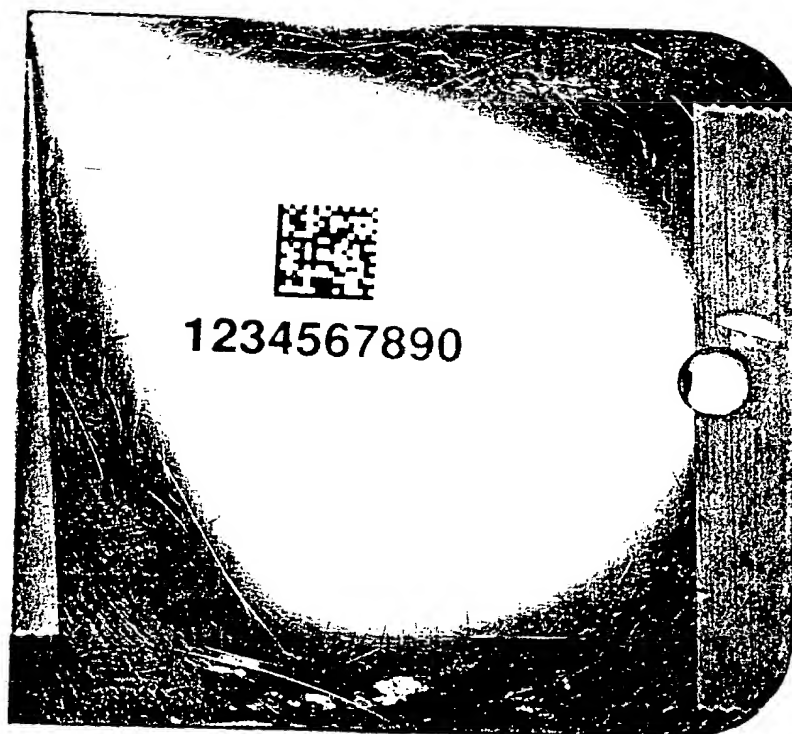


FIG. 2



2/9

BEST AVAILABLE COPY

FIG. 3

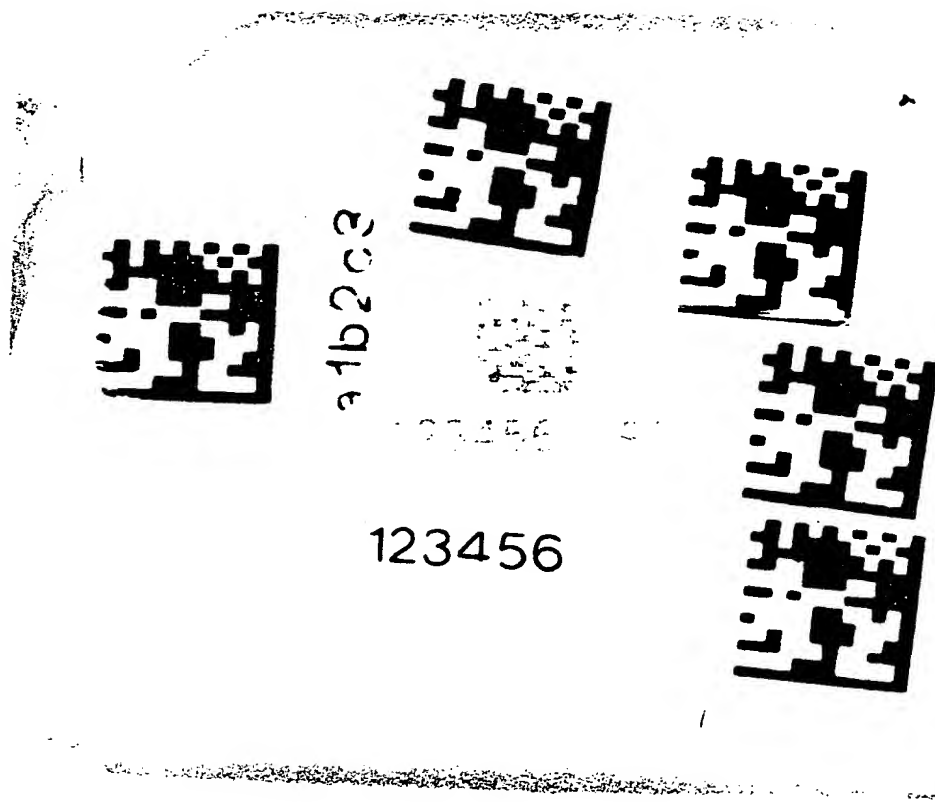
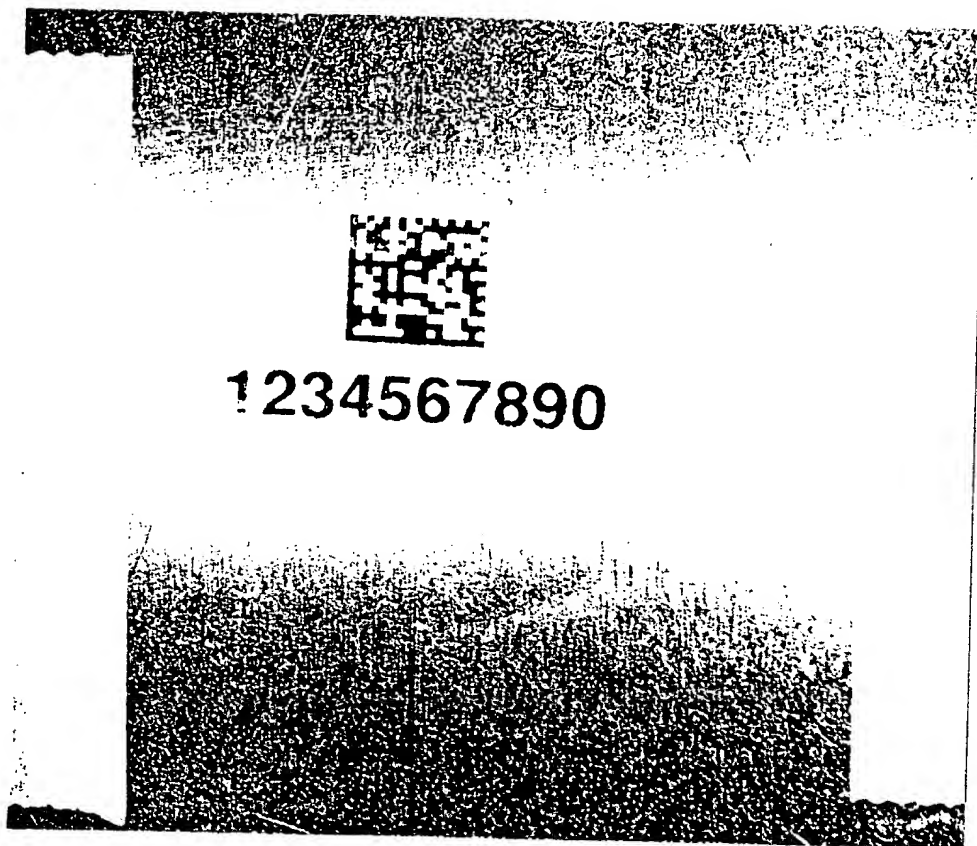


FIG. 4



Inventors: Paul Wollcott Harrison
High Contrast Surface Marking Using Irradiation of Electrostatically Applied Marking Materials
Application No. 09/880,391
Attorney Docket No.: 122656.00121

BEST AVAILABLE COPY

3/9

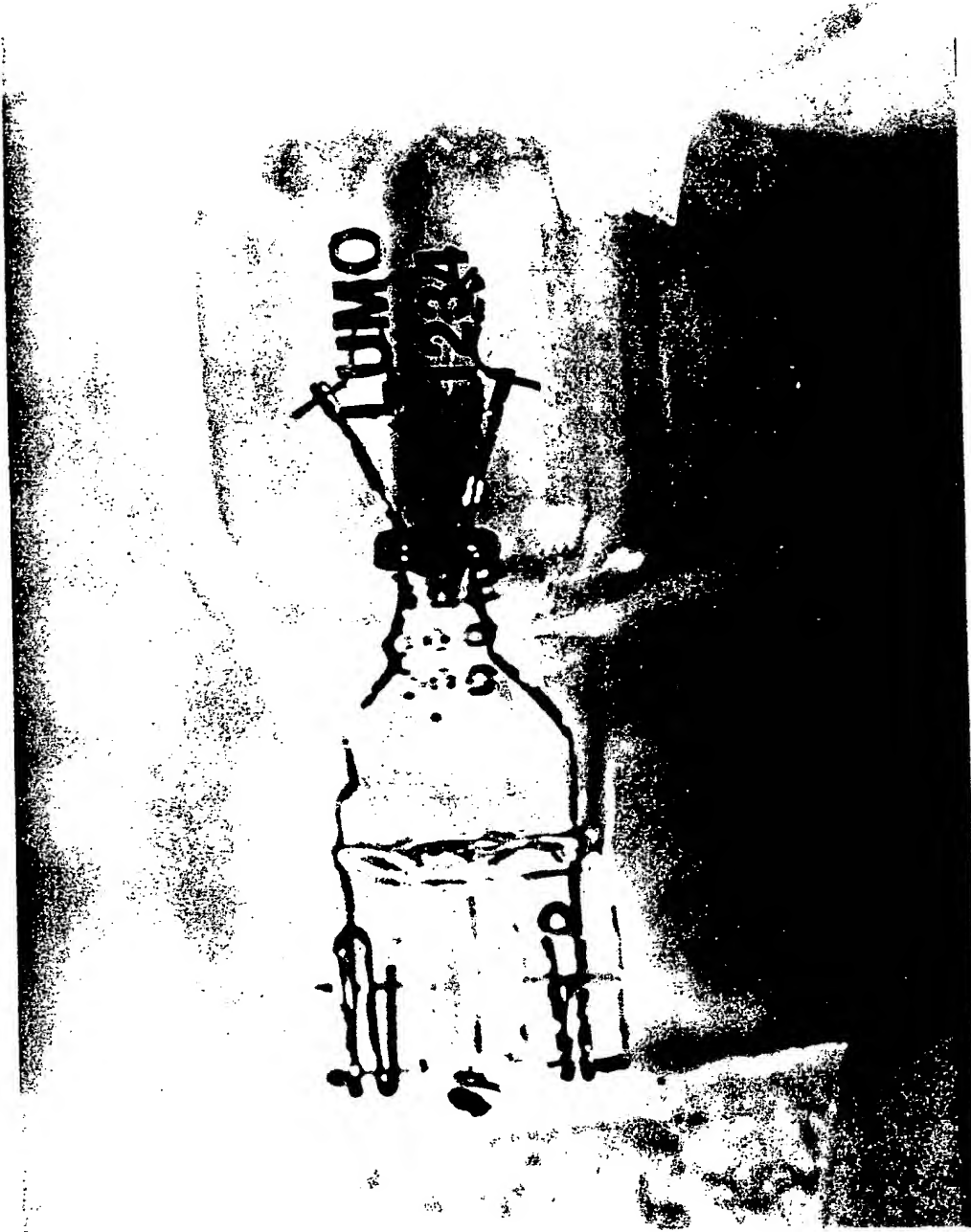


FIG. 5



Inventors: Paul Wollcott Harrison
High Contrast Surface Marking Using Irradiation of Electrostatically Applied Marking Materials
Application No. 09/880,391
Attorney Docket No.: 122656.00121

4/9

BEST AVAILABLE COPY

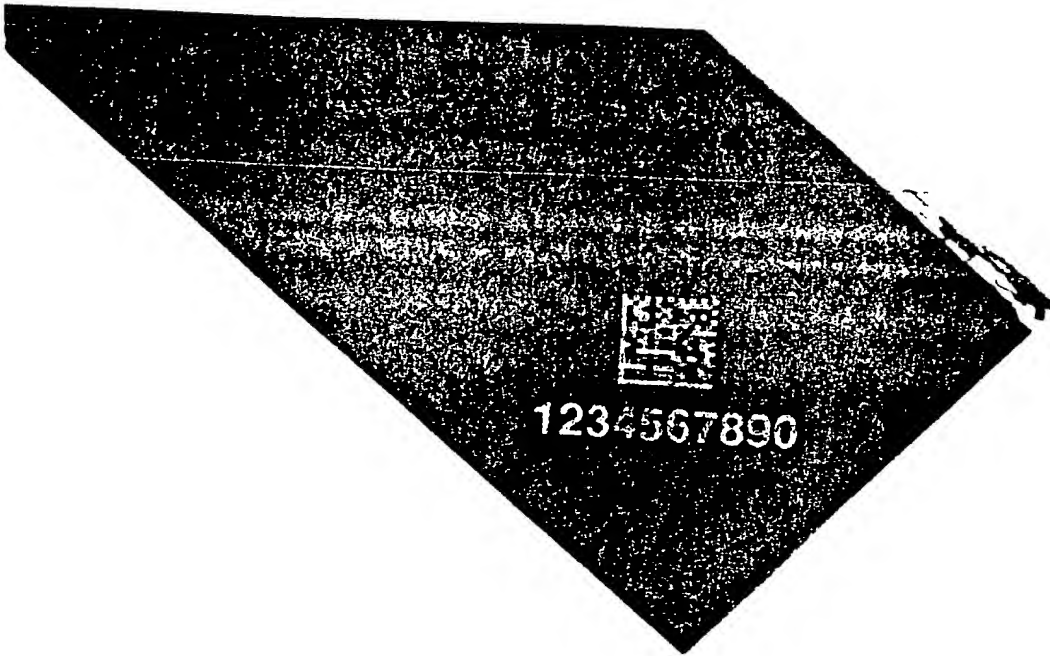


FIG. 6

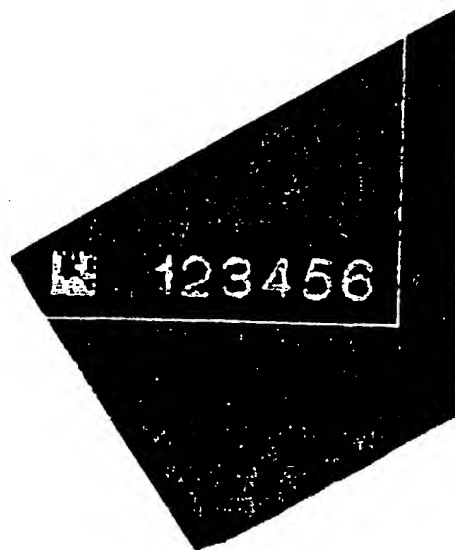


FIG. 7

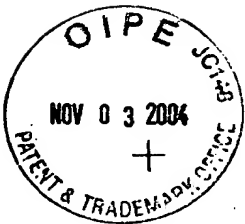


5/9

<u>Substrate Materials</u>	<u>Marking Materials</u>	<u>Beam Speed</u>	<u>Power (watts)</u>	<u>Freq (Khz/Cw)</u>
Aluminum	Mixed Metal Oxide	200mm/sec	5 watts	CW
Aluminum	Glass Frit	250mm/sec	5 watts	CW
Brass	Mixed Metal Oxide	200mm/sec	5 watts	CW
Ceramic	Glass Frit	200mm/sec	5 watts	CW
China	Glass Frit	200mm/sec	5 watts	CW
Copper	Mixed Metal Oxide	100mm/sec	5 watts	20 KHz
Auto Safety Glass	Glass Frit	200mm/sec	5 watts	CW
CRT Display Glass	Glass Frit	200mm/sec	5 watts	CW
Flat Panel Display Glass	Glass Frit	200mm/sec	5 watts	CW
Microscope Slide Glass	Glass Frit	200mm/sec	5 watts	CW
Nickel	Mixed Metal Oxide	200mm/sec	5 watts	CW
Nylon™	Mixed Metal Oxides	250mm/sec	5 watts	CW
Porcelain	Glass Frit	200mm/sec	5 watts	CW
PVC	Mixed Organic Pigments	200mm/sec	5 watts	CW
Stainless Steel	Mixed Metal Oxide	200mm/sec	5 watts	CW
Stainless Steel	Glass Frit	300mm/sec	5 watts	CW
Teflon™	Mixed Metal Oxides	200mm/sec	5 watts	CW
Tin	Mixed Metal Oxide	200mm/sec	5 watts	CW
Titanium	Mixed Metal Oxide	200mm/sec	5 watts	CW

FIG. 8

+



6/9

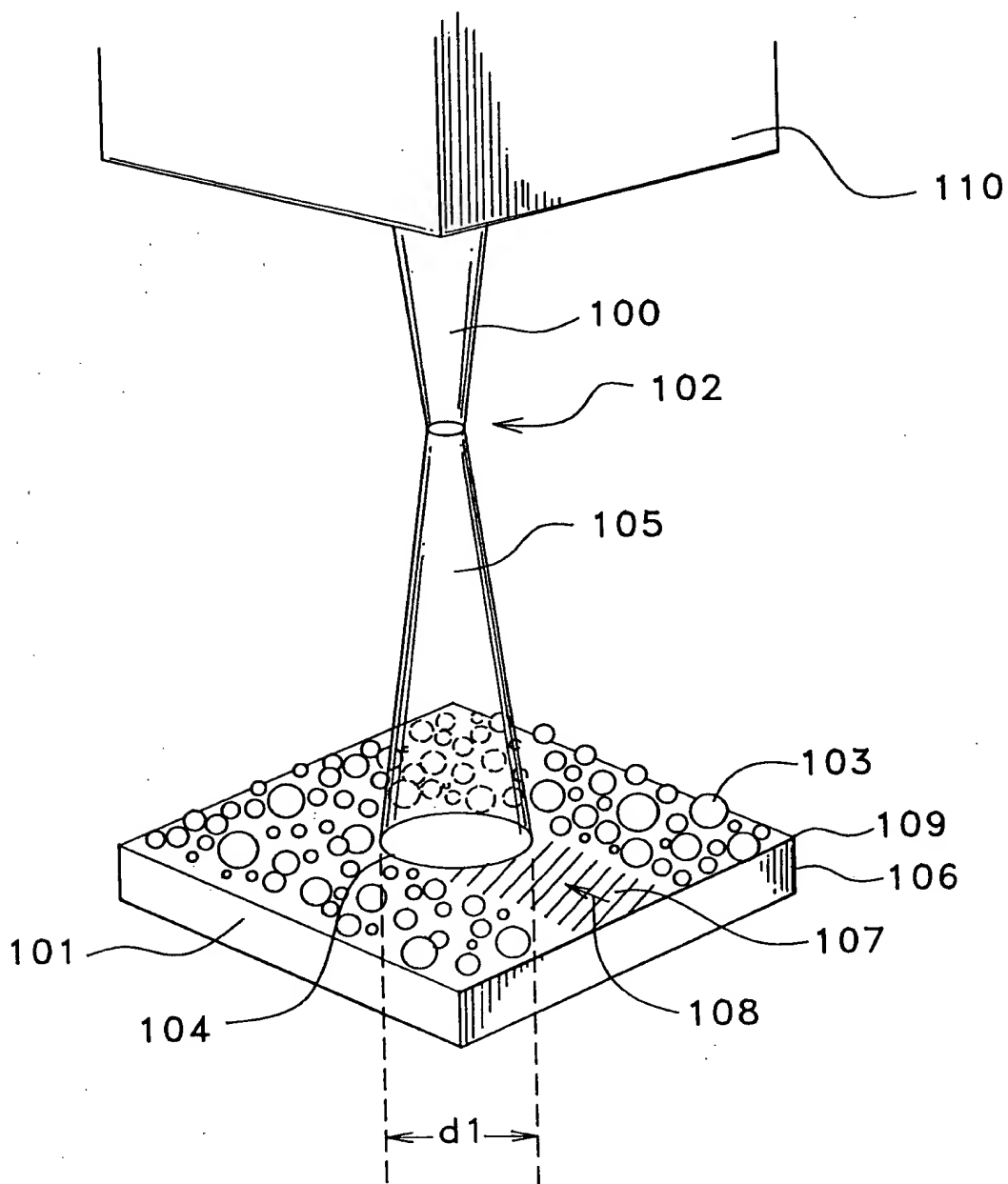
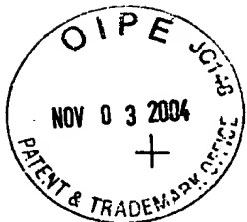


FIG. 9



7/9

MODE:VSI MAG:5.0X SIZE: 368 X 236

BEST AVAILABLE COPY

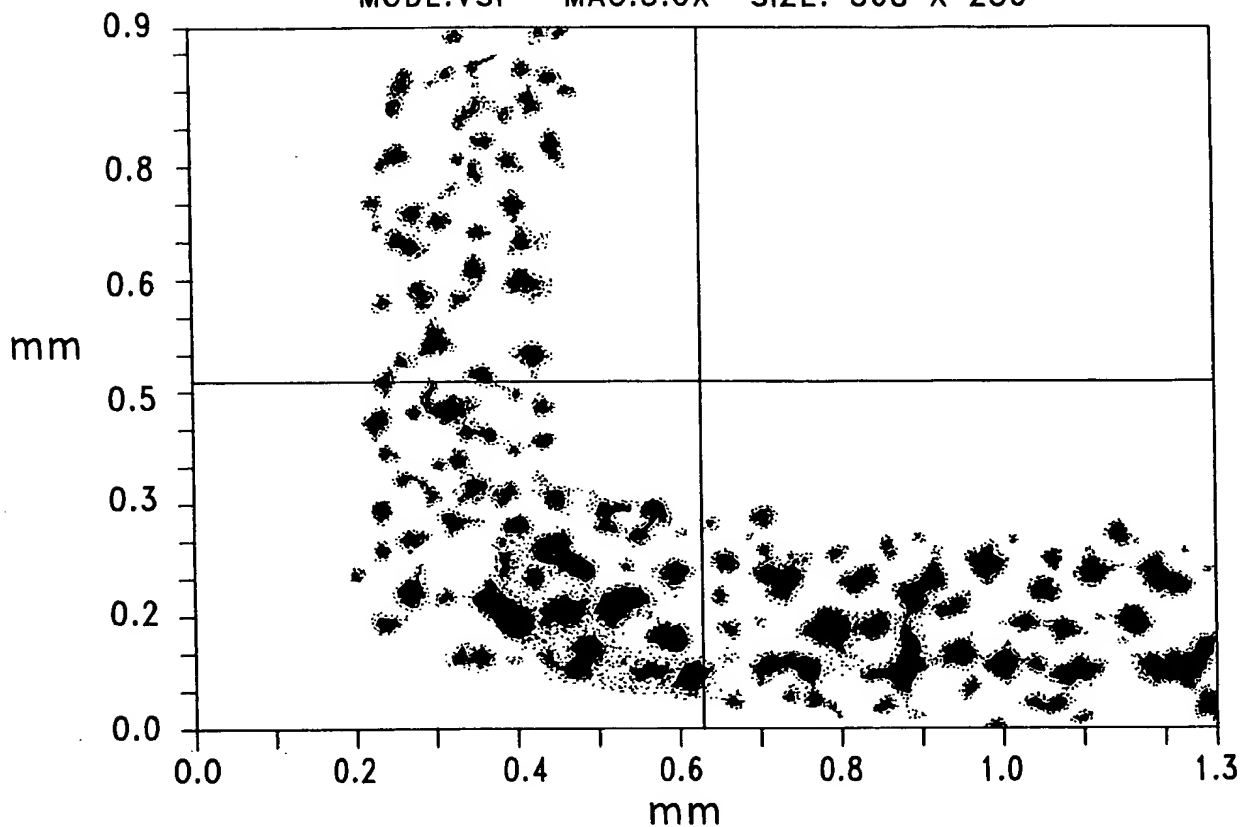


FIG. 10 a

GLASS SLIDE - PORCELAIN/GLASS FRIT

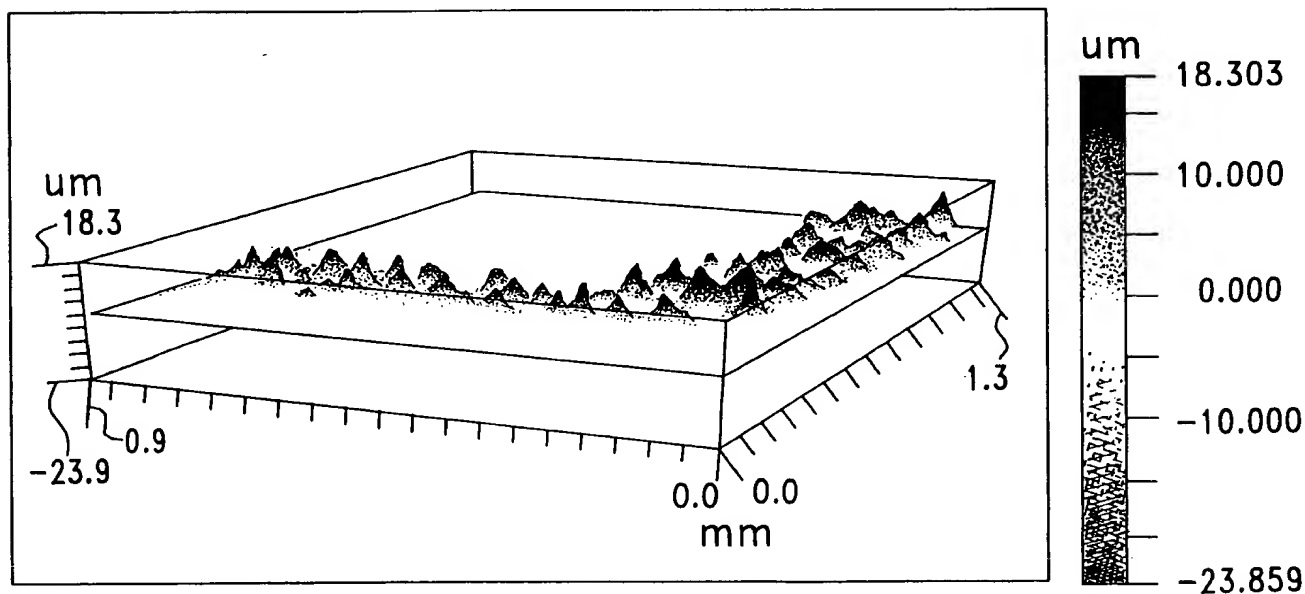
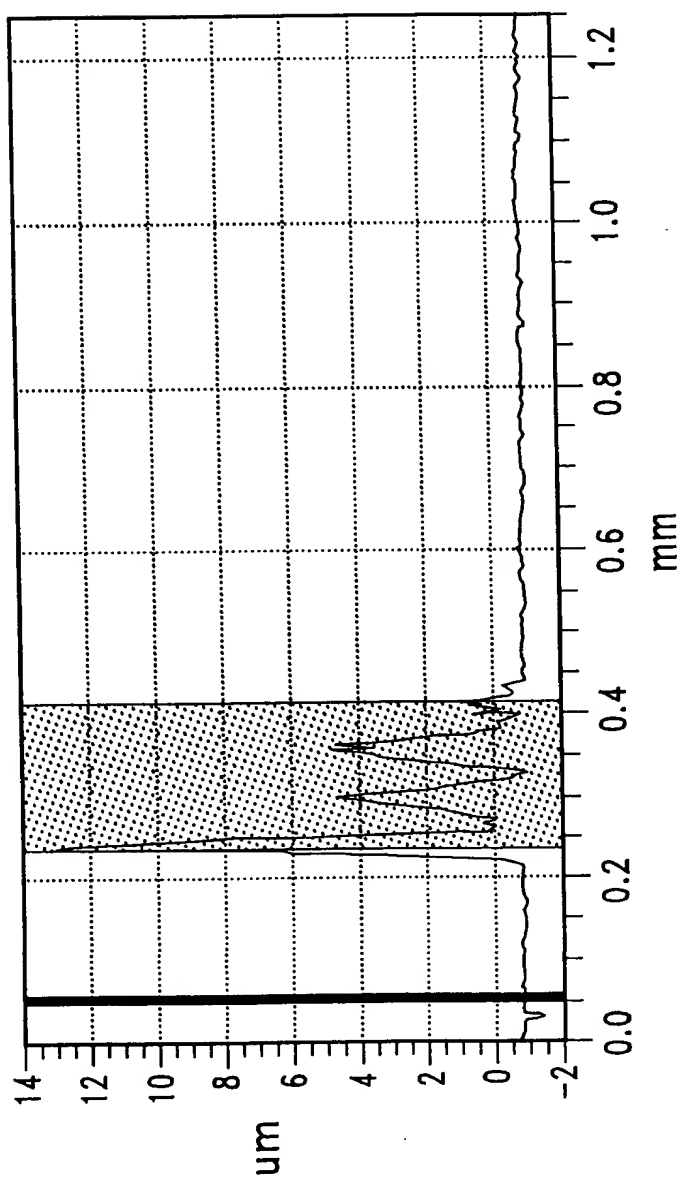


FIG. 10 b



8/9

X-PROFILE/2 PT/RADIAL



L: 0.05 mm -0.83 um
R: 0.33 mm 2.23 um
D: 0.27 mm 3.05 um
Angle: 0.64°
Curve: -14.65 mm
Terms: None
AvgHt: 0.61 um
Area 0.17 um²

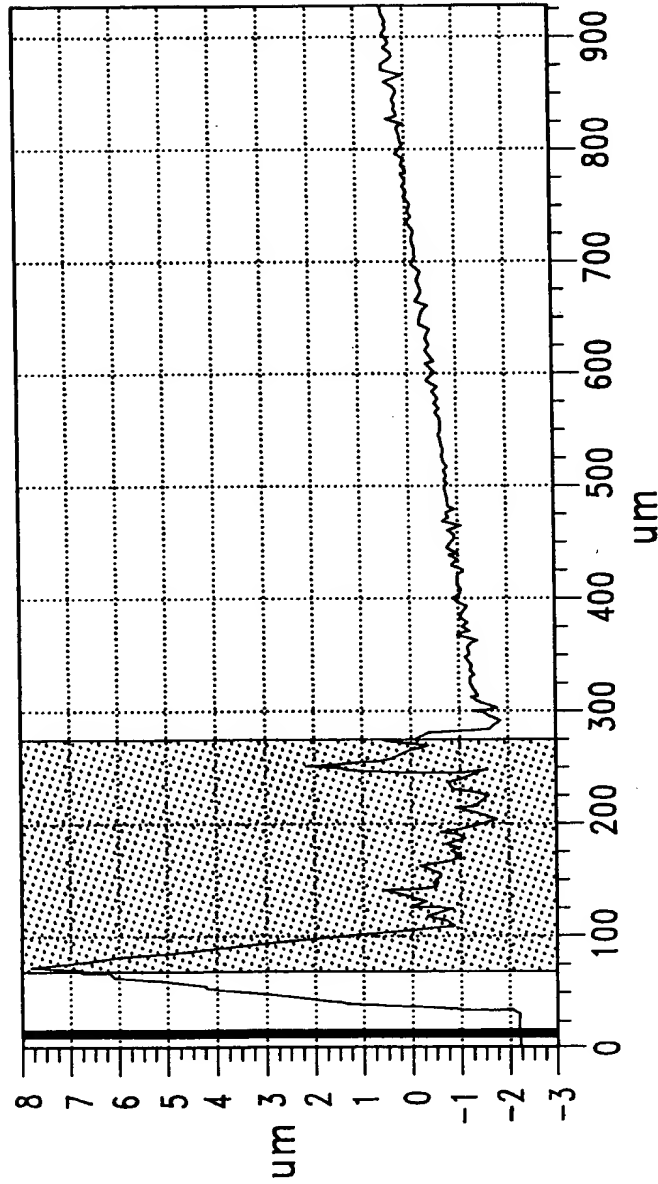
Rq: 2.92 um
Ra: 1.97 um
Rt: 14.09 um
Rp: 13.17 um
Rv: -0.92um

FIG. 10c



9/9

Y-PROFILE/CIRCULAR



Angle: 0.98°
Curve: -492.76 um
Terms: None
AvgHt: 1.20 um
Area: 187.84 um²

L: 13.93 um
R: 170.62 um
D: 156.69 um

Rq: 2.85 um
Ra: 2.44 um
Rt: 9.96 um
Rp: 7.79 um
Rv: -2.16 um

FIG. 10d